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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOERG EHRHARDT, JENS KITTAN, and
WOLFGANG BORGERT

Appeal 2011-004464
Application 09/776,040
Technology Center 2100

Before MAHSID D. SAADAT, KRISTEN L. DROESCH, and
JOHN G. NEW, *Administrative Patent Judges*.

NEW, *Administrative Patent Judge*.

DECISION ON APPEAL

SUMMARY

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's non-final rejection of claims 1-3, 5-10, 13, 14, 17 19, and 20, which stand rejected under 35 U.S.C. § 103(a) as unpatentable over Gessel et al. (US 5,732,213, March 24, 1998) ("Gessel") and Chan et al. (US 5,027,343, June 25, 1991) ("Chan"), and of claims 4, 11, 12, 15, 16, and 18, which stand rejected over Gessel, Chan, and Matsui (US 6,560,723 B1, May 6, 2003) ("Matsui"). We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

STATEMENT OF THE CASE

Independent claim 1 is representative of the invention:

1. A method of setting up a communication procedure between instances, comprising the steps of:

selecting the instances that take part in the communication procedure, one instance being a protocol tester and another instance being an item under test;

selecting a protocol layer to be emulated by the protocol tester for testing a specified protocol layer of the item under test on the basis of the communication procedure, the protocol layer selected from a displayed list of protocol layers that are capable of being emulated by the protocol tester, the list of protocol layers including at least one layer 2 protocol from an OSI (Open Systems Interconnection) reference model;

selecting abstract communication interfaces of the emulated protocol layer for the communication procedure, the abstract communication interfaces selected from a displayed list of abstract communication interfaces associated with the selected protocol layer;

selecting communication data contained in description files to be exchanged at the abstract communication interfaces; and

automatically setting up through the protocol tester the communication procedure on the basis of the selections made in the above selecting steps, with parameters for the abstract communications interfaces and the communication data selecting steps being made graphically.

App. Br. 15.

ISSUE

Appellants argue that the Examiner erred in concluding that claim 1 was obvious over Gessel and Chan. App. Br. 8. Specifically, Appellants contend that the Examiner erred in determining that the Gessel and Chan references teach or suggest to an artisan of ordinary skill a protocol tester in which the user selects protocol layers, service access points, or communication data, from a display, as required in the pending claims. *Id.*

ANALYSIS

Rejection of Claim 1

Appellants admit that Gessel discloses a visual display of a network that allows selection of hardware nodes to be tested. App. Br. 8. However, Appellants contend that Gessel does not teach or suggest that any additional test parameters - such as a protocol layer, abstract communication interface, service access points, or communication data - may be selected from a displayed list, as disclosed in claim 1. *Id.* Moreover, Appellants argue that Gessel fails to teach or suggest that a displayed list of abstract communication interfaces or service access points interfaces are associated with a selected protocol layer. App. Br. 8.

Furthermore, Appellants argue that Chan likewise fails to teach or suggest “selecting a protocol layer to be emulated by the protocol tester ... from a displayed list ... including at least one layer 2 protocol” as recited in claim 1. App. Br. 11.

The Examiner responds that Gessel teaches the claim 1 step of “selecting a protocol layer to be emulated by the protocol tester for testing a specified protocol layer of the item under test,” because Gessel discloses allowing the user to select the protocol hardware no[d]es that are tested by the emulating software. Ans. 7. According to the Examiner, “[b]y selecting hardware no[d]es, user in fact is selecting different protocol layer because different hardware notes are correlated with different protocol layer test.” *Id.* The Examiner further observes that testing of one specific protocol layer may be impossible because a testing higher protocol layer requires the testing of all its lower protocol.” Ans. 7.

Next, the Examiner responds that Gessel also teaches the limitation of claim 1 that recites “the protocol layer selected from a displayed list of protocol layer that are capable of being emulated by the protocol tester.” The Examiner argues that, by displaying a list of hardware no[d]es to the user, the user is in fact given a list protocol layer because different hardware notes are correlated with different protocol layer tests. Ans. 8. The Examiner also points to Chan in support of this argument, contending that Chan explicitly teaches this limitation. Ans. 9.

The Examiner also asserts that Gessel implicitly teaches the limitation of claim 1 that recites “the list of protocol layers including at least one layer 2 protocol from an OSI (Open Systems Interconnection)

reference model.” Ans. 8. According to the Examiner, testing higher protocol layer requires the testing of all its lower protocols. *Id.*

Finally, the Examiner asserts that Gessel teaches the limitation of claim 1 that recites “selecting abstract communication interfaces of the emulated protocol layer for the communication procedure.” Ans. 9. The Examiner maintains that the “list of nodes that serv[e] as access point for testing communication are the interface protocol and that Gessel therefore teaches therefore selecting abstract communication interface[s].” *Id.* The Examiner also asserts that, for the same reason, Gessel also teaches the claim 1 limitation reciting “[s]electing communication data contained in description files to be exchanged at the abstract communication interfaces.” Ans. 4.

We are not persuaded by the Examiner that Gessel and Chan teach, or would suggest to an artisan of ordinary skill, the limitations of claim 1. The Examiner cites the following recitation from Gessel in support of the argument that it teaches the recitation “selecting a protocol layer to be emulated by the protocol tester for testing a specified protocol layer of the item under test”:

The protocol simulator **73** enables a user to select either an actual target hardware node or a node emulated by software for the testing of OSI layers 3-7. If a hardware node is selected (for example, the target telecommunication switch **71**), a communications manager **74** identifies this selection to a protocol simulation socket adaptation module (protocol simulation adaptor) **75** which then selects the proper protocol simulation software **76** and protocol stack **77** for the hardware node.

Gessel, col. 8, ll. 25-34. Gessel continues:

If an emulator is selected (for example the switch emulator 72), the communications manager 74 identifies this selection to a protocol simulation adaptor 75 which then selects the proper protocol simulation software 76 and protocol stack 77 for the emulated system. Messages in UNIX-based TCP/IP protocol are sent through one of the plurality of Internet sockets 78 to the LAN 79. The messages exit the LAN through a gateway Internet socket 83 and are 50 directed in the preferred embodiment to a protocol interface gateway (PIG-tool) 84.

Gessel, col. 8, ll. 41-51.

Gessel thus teaches the selection by the user of a target hardware node or a hardware node that is emulated by software for the testing of OSI layers 3-7. As such, Gessel teaches the selection of hardware access points to the OSI system, but does not teach or suggest a means by which the user can select a layer to be tested. Furthermore, Gessel Fig. 7, to which the cited text refers, depicts the emulator disclosed by Gessel connecting, via a LAN-Unix socket with either a hardware switch or a switch emulator. However, it does not disclose the means by which the user can select a desired layer. Therefore, we find that Gessel does not teach or suggest that the user can specifically select the layer to be tested by the protocol tester.

Moreover, the portion of Chan cited by the Examiner as explicitly teaching the claim 1 step of “protocol layer selected from a displayed list of protocol layers that are capable of being emulated by the protocol tester, the list of protocol layers including at least one layer 2 protocol from an OSL reference mode” discloses the following:

The method comprises the steps of, (a) splitting a network interface disposed at each terminal, (b) inserting at each split interface a configurable interface for matching predetermined apparatus connectable to each terminal as an element thereof, (c) communicating the configurable interfaces with a

ubiquitous transport network for establishing at least one protocol testing path between the corresponding pairs of layers through at least one virtual circuit of the network adapted to pass transparently protocol test messages of normal behavior and to reject protocol test messages of erroneous behavior, and (d) identifiably encoding protocol test messages corresponding to erroneous behavior of the layers under test and further encoding such test messages as protocol test messages of normal behavior acceptable for transparent transmission over the at least one virtual circuit. A second aspect of the invention is apparatus for protocol testing between predetermined corresponding pairs of layers in the terminals. The apparatus comprises, (a) means for splitting a network interface disposed at each terminal, (b) means for inserting at each split interface a configurable interface for matching predetermined apparatus connectable to each terminal as an element thereof, (c) means for communicating the configurable interfaces with a ubiquitous transport network for establishing at least one protocol testing path between the corresponding pairs of layers through at least one virtual circuit of the network adapted to pass transparently protocol test messages of normal behavior and to reject protocol test messages of erroneous behavior, and (d) means disposed at the local terminal for identifiably encoding protocol test messages corresponding to erroneous behavior of the layers under test and further encoding such test messages as protocol test messages of normal behavior acceptable for transparent transmission over the at least one virtual circuit.

Chan, col. 3, ll. 1-40. Importantly, Chan is directed only to hardware layers 1, 2, and 3 of an OSI and explicitly does not apply itself to OSI software layers 4-7 of an OSI, which are implicitly included in claim 1. Chan, col. 4, ll. 20-28. The portion of Chan in column 3 cited by the Examiner (*see Ans. 4*) does teach establishing protocol testing pathways between corresponding hardware layers of layers 1, 2, and 3, but does not teach or suggest a “protocol layer selected from a displayed list of protocol layers that are

capable of being emulated by the protocol tester, the list of protocol layers including at least one layer 2 protocol from an OSI reference mode.”

Neither are we persuaded by the Examiner’s finding that claim 1’s limitations reciting “selecting abstract communication interfaces of the emulated protocol layer for the communication procedure” and “[s]electing communication data contained in description files to be exchanged at the abstract communication interfaces” are taught or suggested by Gessel. *See Ans.* 4. The portion of the Gessel Specification cited by the Examiner as teaching these limitations do not teach or suggest the selection of abstract communication interfaces or communication data, but rather teaches:

a protocol simulator that simulates OSI layers 3 through 7 of the communications protocol, a local area network (LAN) connected to the protocol simulator with a first Internet socket interface which replaces OSI layers 1 and 2 of the simulated communications protocol, and a target telecommunication node connected to the LAN with a second Interact socket interface and performing operations with blocks of application software to validate the use of the communications protocol within the target telecommunication node.

Gessel, col. 3, ll. 18-32. Nor does Figure 6, also cited by the Examiner, teach or suggest these limitations.

CONCLUSION

Therefore, based on the analysis above, we conclude that the Examiner erred in rejecting claim 1, independent claims 8 and 20 which recite similar features, and the remaining claims dependent therefrom, under 35 U.S.C. § 103(a).

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DECISION

The Examiner's decision rejecting claims 1-20 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2010).

REVERSED

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